

IN THE SPECIFICATION

A set of amended specification paragraphs in clean form is set out immediately below. Please enter the amended paragraphs as a substitute for the previous version or versions of the paragraphs.

*Paragraph beginning at page 5, line 10:*

A1  
Fig. 2 is a generalised software architecture for a client-server environment. On the client machine, a Graphical User Interface (GUI) layer 210 provides the human-machine interface for a user. The GUI layer 210 interfaces with an application layer 220, where the specific computing operation or purpose performed by the client-server system resides. The application layer 220 interfaces with a middleware layer 230 that handles system aspects such as system resource usage, operating system locks, shared memory access, container services, queuing Services, transaction Services, logical unit of work coordination, inter-process communications, user access control services and configuration retrieval services. As shown, application data, packaged into " maps " or " containers " 250, is passed to the middleware layer 230. The middleware layer 230 represents the operating system and communications services. The transport layer 240 of the client machine is in network communication with the server machine. The server machine replicates the layers 240, 230 and 220, providing a replica transport layer 280, replica middleware layer 270, and replica application layer 260, and functions thereof.

*Paragraph beginning at page 5, line 24:*

A2  
The content of a map/container 250 includes the identification of the " service " which the server machine application is to execute, together with the application data which is required by the particular application process. Fig. 3 shows a representative data packet 310 having header information 320 specific to the transport and middleware layers 240 and 230 (Fig. 2). Optionally, there can be similar trailer information 340. The maps/container content 330 comprises the services information and application data.

*Paragraph beginning at page 6, line 1:*

A3

Fig. 4A shows an example of a server machine 100, emulating a client machine, in networked connection with a server machine 102 that is to be stress-tested.

*Paragraph beginning at page 6, line 14:*

A4

(i) The live maps/containers for a plurality of transactions for a chosen application must firstly be collected. By "live" is meant actual transactions, as opposed to simulations.

*Paragraph beginning at page 7, line 1:*

A5

In the pre-runtime 120, a Business Workload Definition File 501 is created and populated, creating 502 a Business Workload Distribution File 503. This file 503 and a Mapping File 505 (mapping Business Transactions To Machine Transactions 505) are merged to create 504 the machine workload, resulting in a Machine Workload Execution Definition File 506. In the run-time 122, the pre-stored Live Maps 510 are selectively read by a Map Sending Program 511 which executes the Workload Execution File 506 to place the process load onto the server 102 running the application under test. The Map Sending Program 511 is replicated: one per client machine being simulated. The server 102 under test executes the requested load and returns a reply map. Such reply maps are stored on the emulated client machine in the Maps Received File 512. It is necessary for the Business Workload Definition File 501 and the Mapping File 503 to relate to the same application that is being run by the server 102 under test. In the same way, the stored maps in the Maps Received File 512 must relate to the same server application.

*Paragraph beginning at page 7, line 14:*

A6 The performance criteria, such as the average response time of a transaction or the proportion of CPU time taken by a transaction, can be determined by the server under test 102 itself, or can be determined on the client emulation server (to include the communications link performance). Whichever way, the results of the performance testing are stored in a Logging File 515.1 on the client emulation server or on the server under test Logging File 515.2.

*Paragraph beginning at page 7, line 21:*

A7 An example of the Business Workload Definition File 501, for a Telco customer inquiry and ordering system (such as generally described above) is as follows:

*Paragraph beginning at page 8, line 1:*

A8 An example of the file 505 which maps Business Transactions (of sub-type DA) to a sequence of maps to be executed is as follows:

*Paragraph beginning at page 8, line 16:*

A9 An example of Machine Workload Execution Definition File 506 is as follows:

*Paragraph beginning at page 9, line 9:*

A10 Referring again to Fig. 2, as examples of implementations for the middleware layers 230 include the IBM CICS™ or ENCNIATM systems. In relation to the transport layer 240, examples of implementations are either TCP/IP or SNA. Any convenient physical layer network can be utilized, such as a token passing LAN. The application layer 220 must have the capability, either inherently or by specific coding, to create or write live maps.